

National Climatic Data Center (NCDC)

Asheville, North Carolina

- NCDC is the steward of the Nation's in-situ and satellite data and information.
- Collocated with the U.S. Air Force and Navy Climatology offices.
- The three agencies fulfill much of the Nation's climatological requirements.

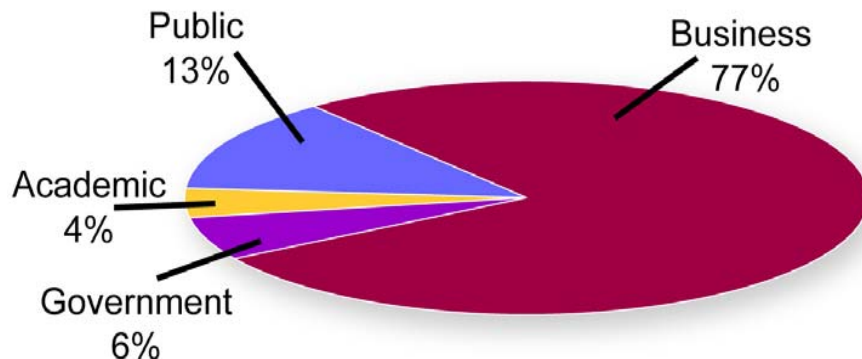


Mission Statement

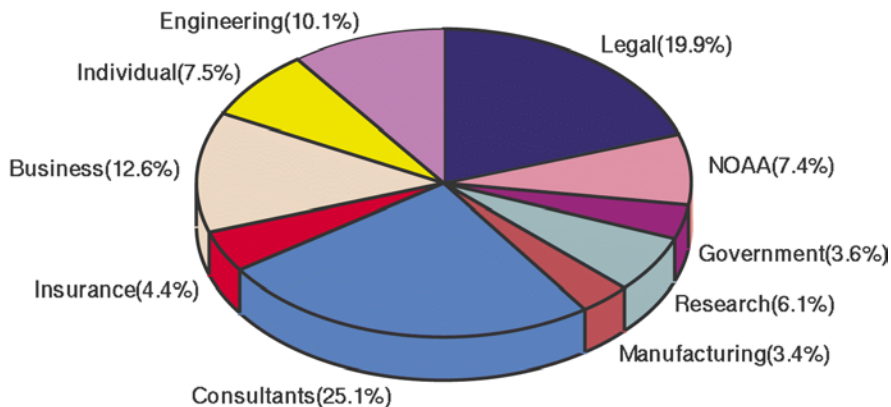
The National Climatic Data Center is responsible for the stewardship and access to the Nation's climate-related data and information, and is also responsible for assessing and monitoring the national and global climate.



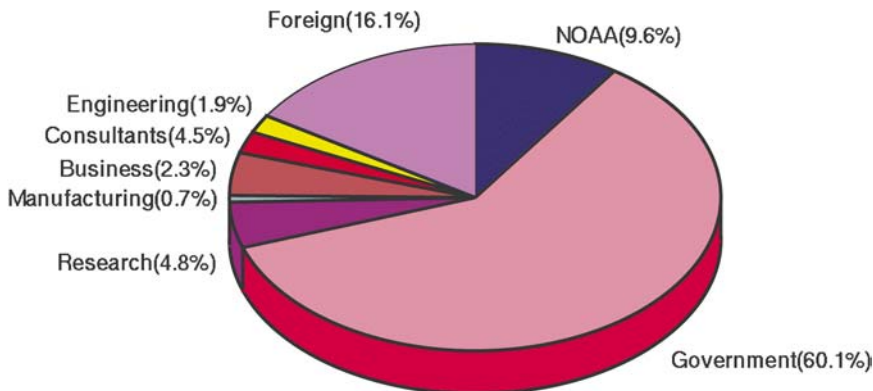
👉 Data access at the NOAA National Climatic Data Center



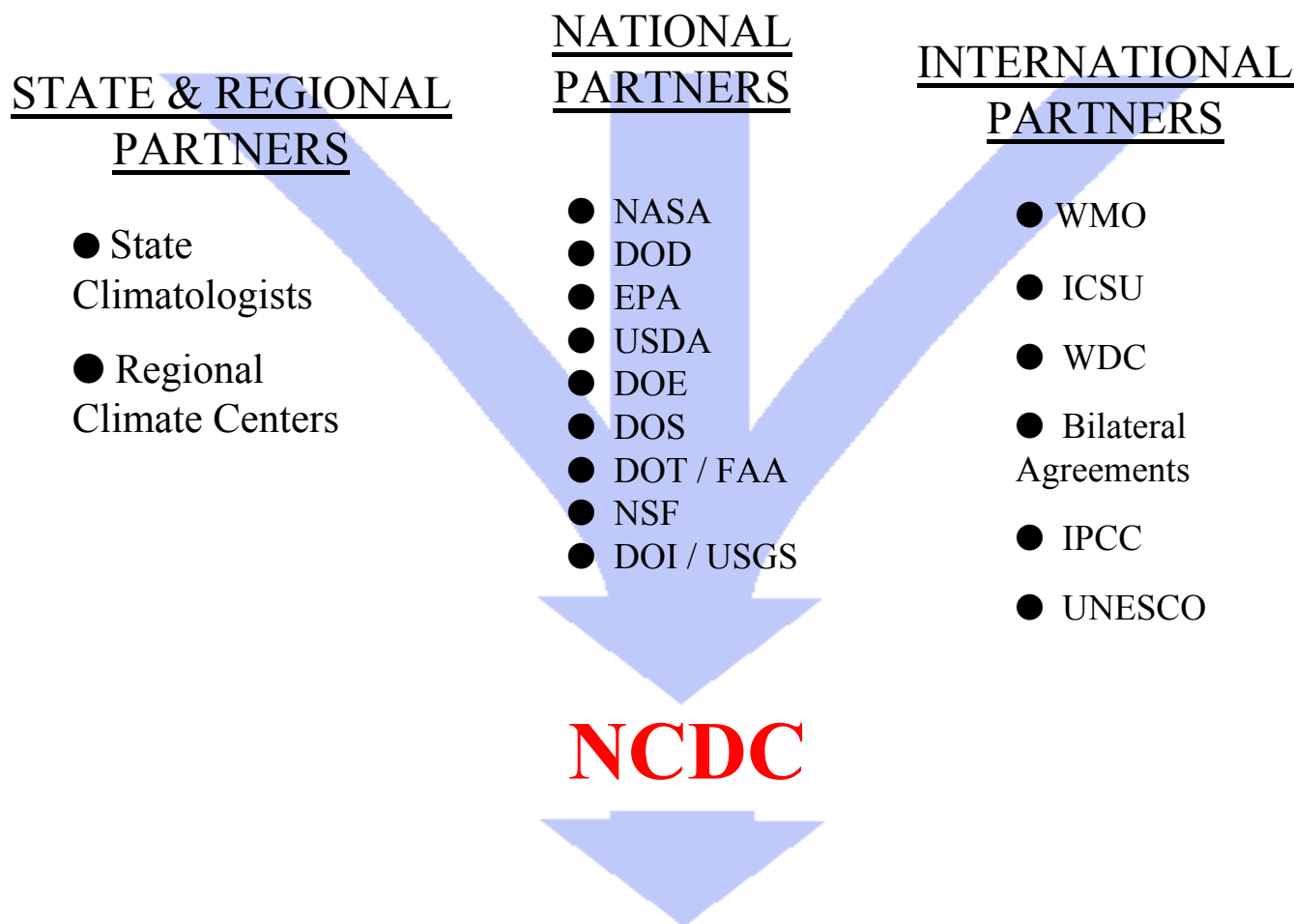
Earth Platform



Space Platform



- Acquire / Ingest
- Archive
- Standards
- Access
- Certify
- Quality Control
- Analyze



**“Supporting the development of the national economy
in a global environment since the mid-1900s”**

☞ All disciplines of the national economic infrastructure

☞ Making the U.S. economically competitive

- | | |
|---------------------------|------------------|
| ✓ Consumer goods | ✓ Investments |
| ✓ Communications | ✓ Construction |
| ✓ Aviation | ✓ Transportation |
| ✓ Agriculture | ✓ Energy |
| ✓ Insurance & Reinsurance | |

☞ National Security

☞ Policy

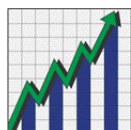
☞ Sustainable development



CONSULTING METEOROLOGIST *Provide expert testimony in court*



LEGAL *Certified evidence in court cases*



INSURANCE INDUSTRY *Rate determination & claims settlement*



INDIVIDUAL *Recreation, retirement, entertainment, vacations*



ENGINEERING *Provide guidance in the design and construction of facilities / infrastructure*



BUSINESS *Sales impact, site relocation, environmental impacts*



NOAA / GOVERNMENT *Research, investigations, legal claims, risk management, policy guidance / support*



RESEARCH *Environmental issues, science studies, weather, prediction*

- 1 Acquire and ingest data



- 2 Archive the Nation's meteorological data - national & international
- 3 Provide access to data & metadata
- 4 Monitor & describe the national & global climate

Forecast Warning Analysis ●

NWS Coop Observers ●

Hourly Airways ●

NCEP Charts ●

Ship Reports ●

Rocketsonde ●

Radiosonde ●

Storm Data ●

NEXRAD ●

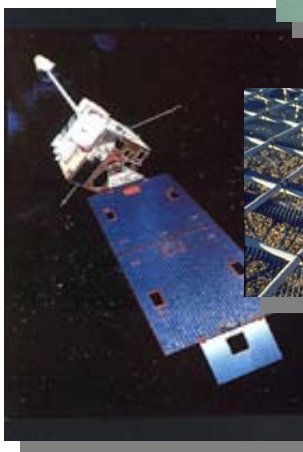
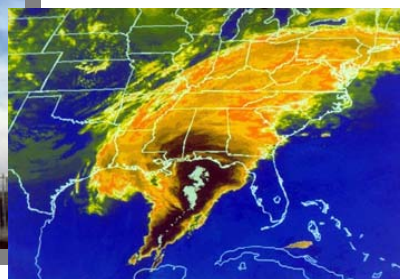
Satellite ●

Aircraft ●

Profiler ●

ASOS ●

CRN ●



- Original manuscripts
- Publications
- Autographic charts & rolls
- Magnetic tape
8mm, 3480, 3590
- Electronically
- Punched paper tapes
- Analyzed charts
- Optical disks
- Paper copies



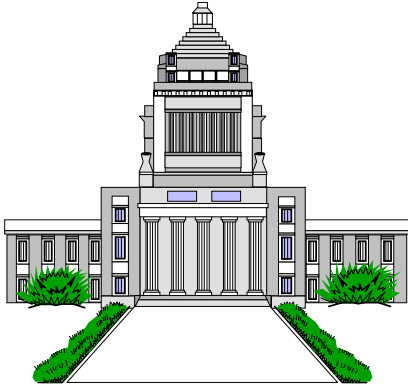
1 Acquire & ingest data

2 **Archive the
Nation's
meteorological
data -
national and
international**

3 Provide access to
data & metadata

4 Monitor & describe
the national &
global climate



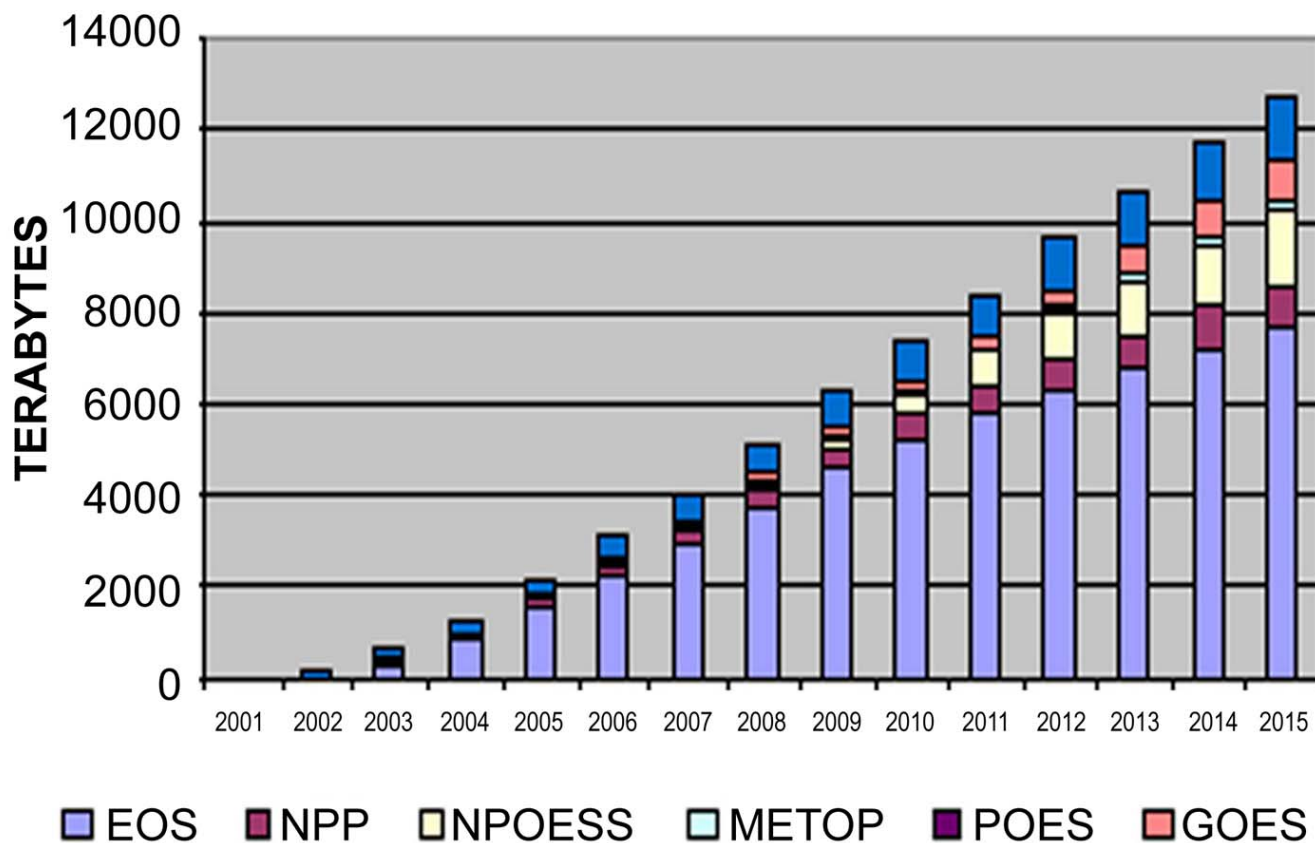


**#1 Data required by law to
be archived**

**#2 Long-term economic and
scientific value**



MAJOR SYSTEMS PROJECTED ARCHIVE GROWTH 2002 - 2015

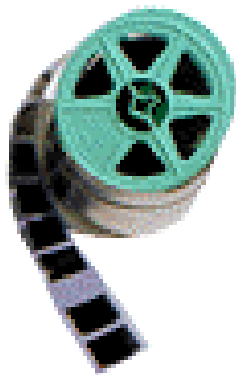
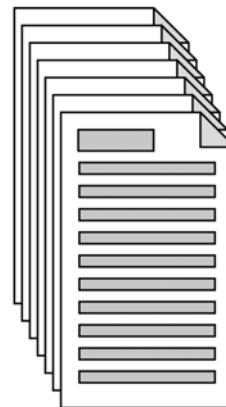


Manuscript / Autograph

200 Million Pages* - 37,878 Miles

(1.5 times around the earth)

* in process of being imaged and archived in robotics system



35mm & 16mm Film

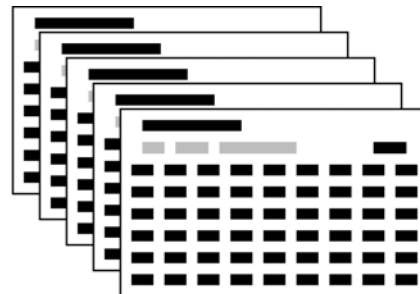
125,129 Rolls = 2,340 Miles

(Washington D.C. to Los Angeles)

Microfiche

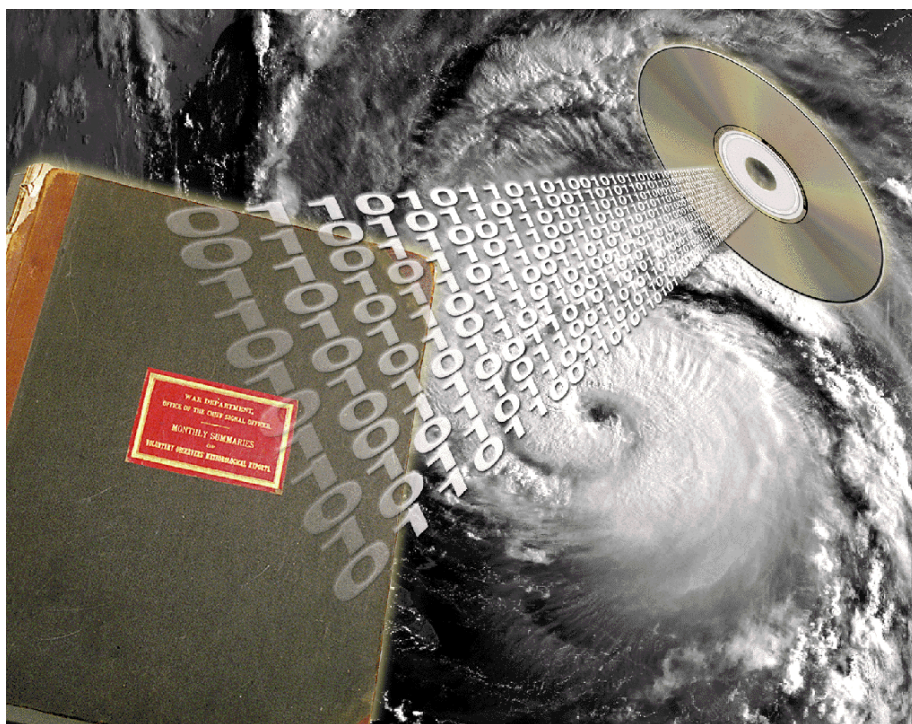
1.2 Million Pages = 114 Miles

(Washington D.C. to Philadelphia)



- ① Acquire & ingest data
- ② Archive the Nation's meteorological data - national & international

- ③ **Provide access to data and metadata**

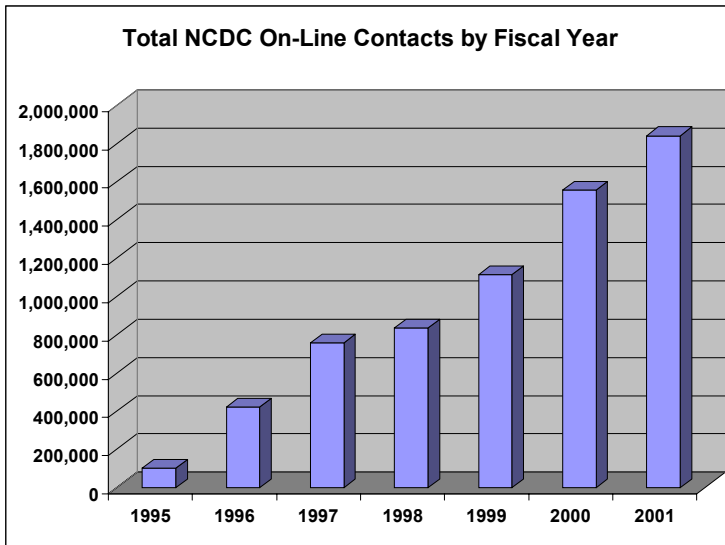
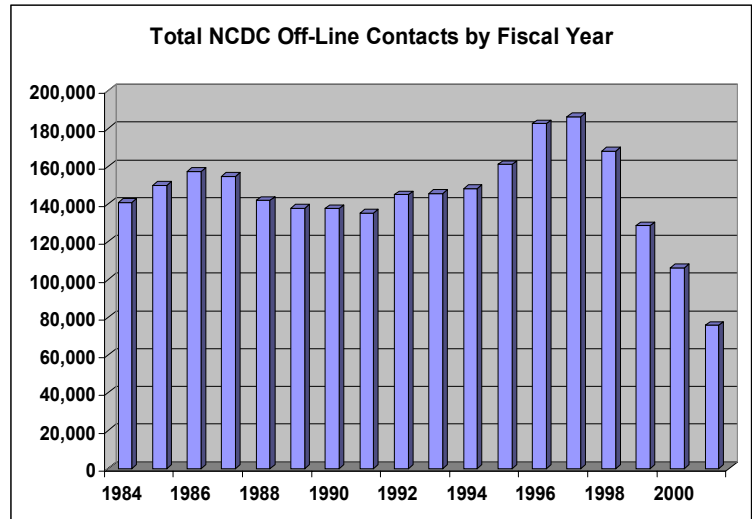


- ④ Monitor & describe the national & global climate

Offline Access



Continues to exhibit a sharp drop



Online Web Access

Continues to exhibit a rapid increase

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[NESDIS](#)
[NCDC](#)
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[Climate](#)
[Radar](#)

National Climatic Data Center

"World's Largest Archive of Weather Data"

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In the Spotlight



Thunderstorms Across the Nation

An Atlas of Storms, Hail, and Their Damages in the 20th Century

[Thunderstorms Across the Nation](#)

Find Weather Station/Data (city/station name)

Locate NCDC Products by

[Most Popular Products](#) | [User Description](#)
[Weather Station/City](#) | [Category / Type](#)
[NVDS \(Keywords, Maps, Regions, etc.\)](#)

Online Store

[Products](#) | [Subscriptions](#) | [Order Status](#)

Browse by Data Type

[Satellite](#) | [Climate](#) | [Radar](#)

Discover Information About Climate

[Research](#) | [Monitoring](#) | [Extremes & Events](#)

NCDC is the world's largest active archive of weather data. NCDC produces numerous climate publications and responds to data requests from all over the world. NCDC operates the [World Data Center for Meteorology, Asheville](#) which is collocated at NCDC. NCDC's web site has received a number of [awards](#).

NCDC supports a three tier national climate services support program - the partners include: NCDC, [Regional Climate Centers](#), and [State Climatologists](#).

The [National Virtual Data System \(NVDS\)](#) uses the [NOAA Server](#) metadata search engine to find and access NOAA data from all NOAA Data Centers.

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[About NCDC](#) | [What's New](#) | [What's Hot](#)

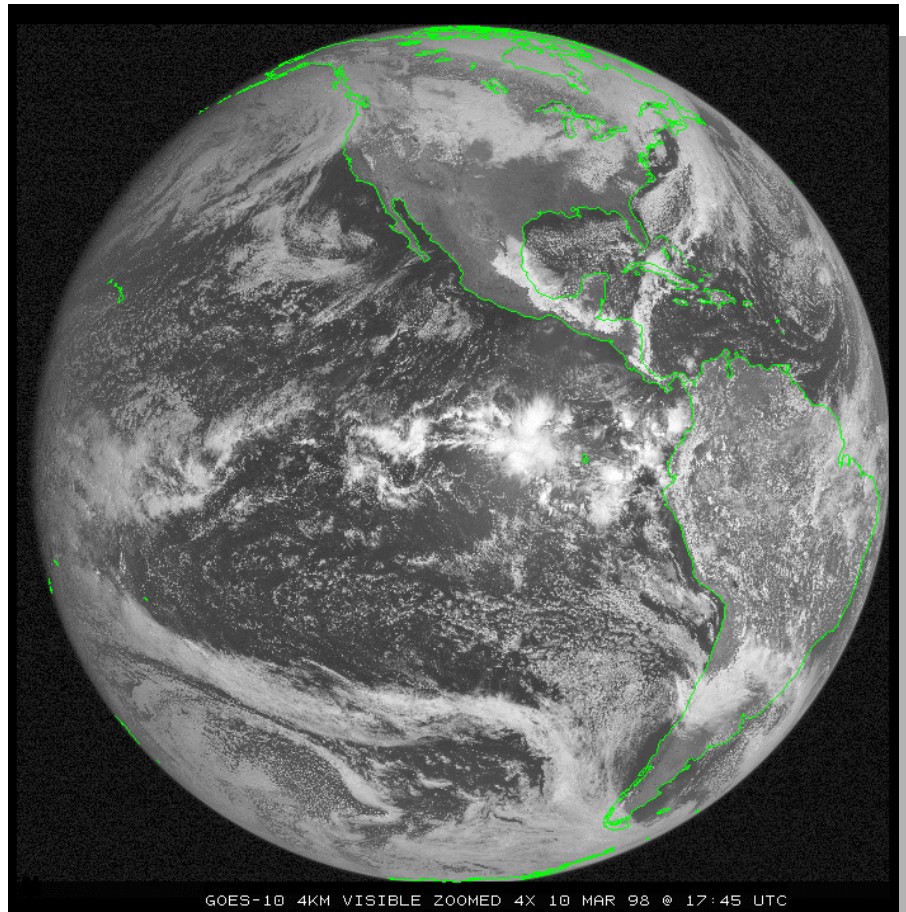


About NCDC

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- [World Data Center for Meteorology, Asheville](#)
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- ① Acquire & ingest data
- ② Archive the Nation's meteorological data - national & international
- ③ Provide access to data & metadata

- ④ Monitor and describe the national and global climate**



Quality Control

- ✓ Surface
- ✓ Upper Air
- ✓ Marine

Research Quality Baseline Data Sets

- ✓ Blended space based in-situ data
- ✓ Surface (GHCN / USHCN)
- ✓ Upper Air (CARDS)
- ✓ Marine (COADS)
- ✓ Peer reviewed papers

Climate Descriptions & Climate Historical Perspective

- ✓ Local Climatological Data
- ✓ Climatological Data
- ✓ Storm Publications
- ✓ Technical Reports
- ✓ Climate Atlases
- ✓ Climate Normals

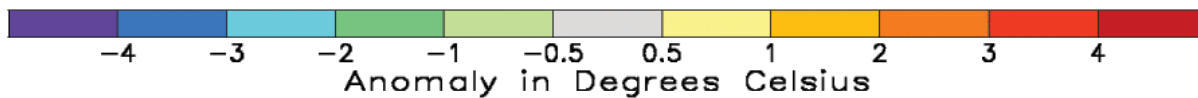
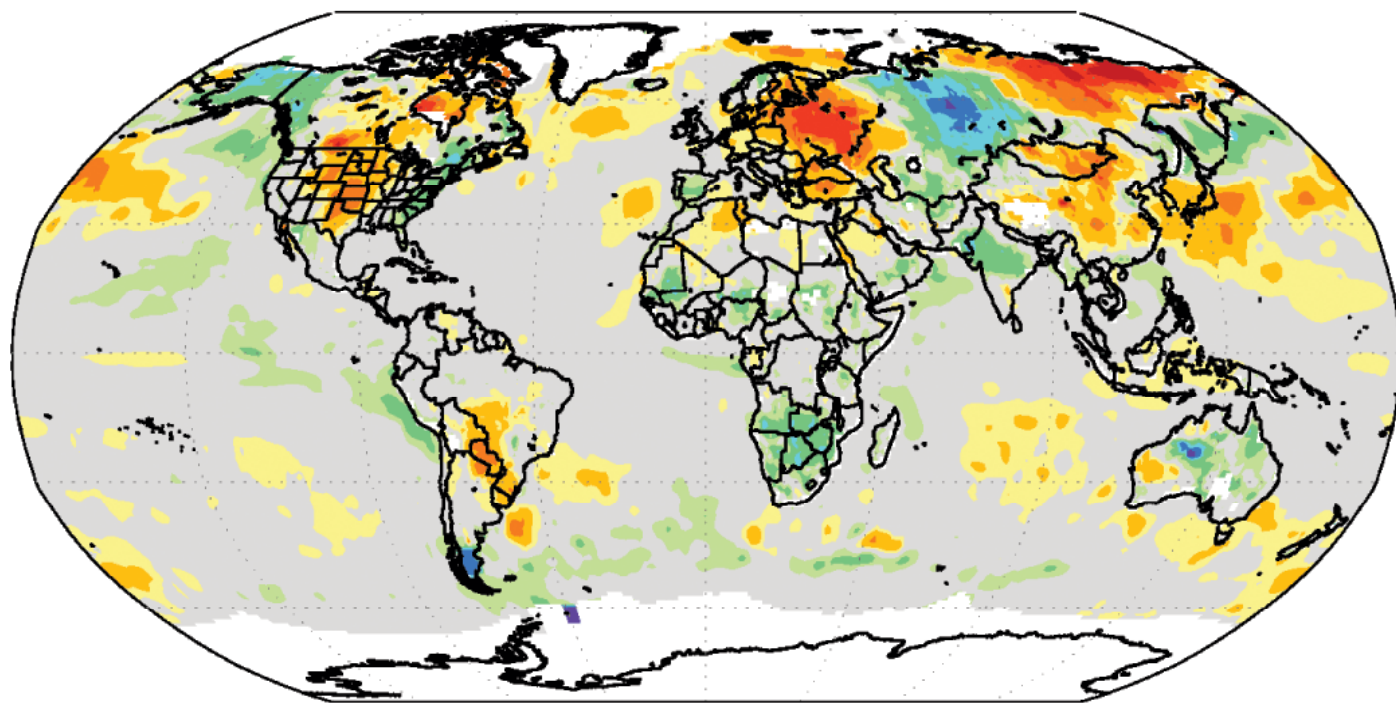
Climate Monitoring

- ✓ Network Monitoring
- ✓ Variations (U.S. & Globe)
- ✓ Trends (U.S. & Globe)
- ✓ Extreme Weather & Climate Events

Assessments

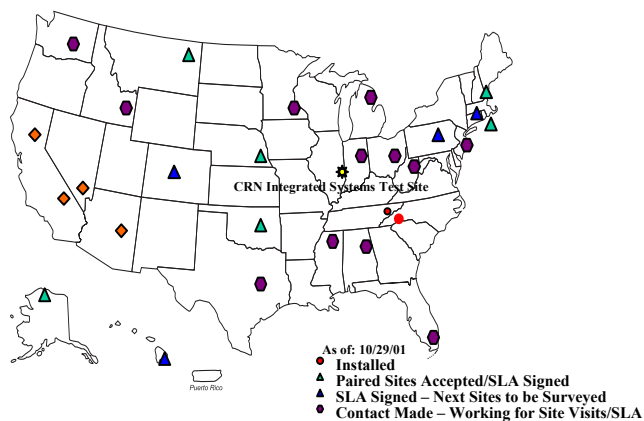
- ✓ US National Assessments
- ✓ IPCC

JULY 2001 SURFACE TEMPERATURE ANOMALIES
VALUES ARE A BLEND OF SATELLITE AND IN SITU OBSERVATIONS
CLIMATOLOGICAL BASE PERIOD IS 1992 - 2001



***Primary goal:** provide future long-term homogeneous observations of temperature and precipitation that can be coupled to past long-term observations for the detection and attribution of present and future climate change.*

CRN Station (at the North Carolina Arboretum)



**First 26 CRN Geographic Locations
Two CRN Instrument Sites
per Geographic Location
(Proposed)**

Highlights of five new major projects at NCDC:

- ✓ **The Climate Reference Network**
- ✓ **Climate Monitoring Activities**
- ✓ **NOAA Operational Model Archive & Distribution System (NOMADS)**
- ✓ **The U.S. Climate Atlas**
- ✓ **The 1971-2000 Climate Normals**

For more information

- ✓ **Exhibit Hall Booth 103**
 - Wednesday and Thursday**
 - Internet Access Information**
 - Product Guides and Data Description**
- ✓ **Information on NCDC's Summer Internship Program**